

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1.-37. (Cancelled)
38. (Currently Amended): A system for sending segments using different forward error correction methods on a network comprising:
 - A. a plurality of network nodes forming a network;
 - B. a time division multiplexed data transfer mechanism link which is divided into a plurality of time slots for transfer of one or more data segments between said plurality of network nodes on said network;
 - C. wherein said plurality of network nodes further comprises a sending network node; and
 - D. wherein said sending network node further comprises a dynamic forward error correction encoder which generates said one or more data segments[[.]]; and
 - E. wherein the system is configured to select a forward error correction method from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network.
39. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said network is selected from the group consisting of a wireless network, a light frequency network, a power line network, and a wired network.
40. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder generates a forward error correction field which size is based on

a preamble.

41. (Currently Amended): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder encodes a segment with a forward error correction method mechanism selected from the group consisting of Hamming codes, Convolutional codes, Reed-Solomon codes, Low Density Parity Check Codes, Trellis codes, Block Turbo codes and Walsh codes.

42. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder generates a preamble that is 40 bits in length.

43. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder encodes segments with a (5/16) rate forward error correction code.

44. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder generates a preamble that indicates no forward error correction.

45. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error detection encoder generates a preamble based on said one or more segment's length.

46. (Currently Amended): A system for sending segments using different forward error correction methods on a network as recited in claim 38, wherein said dynamic forward error correction encoder generates a preamble based on a network condition.

47. (Original): A system for sending segments using different forward error correction methods on a network as recited in claim 46 wherein said network condition is selected from the group consisting of one or more cyclic redundancy check errors and one or more forward error correction errors.

48.-57. (Cancelled)

58. (Currently Amended): A system for receiving segments using different forward

error correction methods on a network comprising:

- A. a plurality of network nodes forming a network wherein said plurality of network nodes further comprises a receiving network node;
- B. a time division multiplexed data transfer ~~mechanism-link~~ which is divided into a plurality of time slots for transfer of one or more data segments between said plurality of network nodes on said network; and
- C. wherein said receiving network node further comprises a dynamic forward error detection decoder which decodes said one or more data segments[[.]]; and
- D. wherein the system is configured to dynamically utilize different forward error correction methods selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said receiving network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network.

59. (Original): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said network is selected from the group consisting of a wireless network, a light frequency network, a power line network, and a wired network.

60. (Currently Amended): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder decodes a forward error correction ~~mechanism's~~ segment size is based at least in part upon ~~on~~ a preamble.

61. (Currently Amended) A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder ~~decodes~~ determines said one or more data segment's length based at least in part upon ~~on~~ a preamble.

62. (Original): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder decodes said data segments with a method selected from the

group consisting of Hamming codes, Convolutional codes, Reed-Solomon codes, Low Density Parity Check Codes, Trellis codes, Block Turbo codes and Walsh codes.

63. (Original): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder is used to detect errors within said one or more data segments.

64. (Original): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder is used to correct errors within said one or more data segments.

65. (Currently Amended): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder decodes based at least in part upon a preamble that is 40 bits in length.

66. (Currently Amended): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder decodes data using a 5/16 rate forward error correction code.

67. (Currently Amended): A system for receiving segments using different forward error correction methods on a network as recited in claim 58, wherein said dynamic forward error correction decoder detects decodes a preamble which indicates no forward error correction.

68.-125. (Cancelled)

126. (Currently Amended): A method for sending segments using different forward error correction methods on a network comprising:

A. selecting a forward error correction mechanism method and an associated preamble, wherein said forward error correction method is selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with a sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions, and wherein at least one of (1) the choice of error correction method and (2)

the amount of error correction, depends upon the number of errors and the type of errors on the network;

- B. adding forward error correction to segment data; and
- C. sending said preamble which indicates which indicates said associated preamble, which identifies said forward error correction mechanism method and contains said segment data, from said data from a sending network node across a time division multiplexed network.

127. (Original): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein sending said segment data further comprises sending said segment data on said network further comprising a network selected from the group consisting of a wireless network, a light frequency network, a power line network, and a wired network.

128. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein selecting said forward error correction mechanism method further comprises selecting a forward error correction mechanism method selected from the group consisting of Hamming codes, Convolutional codes, Reed-Solomon codes, Low Density Parity Check Codes, Trellis codes, Block Turbo codes and Walsh codes.

129. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein said selecting said associated preamble further comprises selecting said preamble a preamble that is 40 bits in length.

130. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein selecting said forward error correction mechanism method further comprises selecting said forward a forward error correction mechanism method which uses a 5/16 rate forward error correction code.

131. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein selecting said preamble further comprises selecting said preamble a preamble which indicates no

forward error correction.

132. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein said selecting of said forward error correction method mechanism further comprises selecting forward error correction is based at least in part upon ~~on~~ said segment data length.

133. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 126, wherein said selecting of said forward error correction method mechanism further comprises selecting said a forward error correction mechanism method based at least in part upon a network condition.

134. (Currently Amended): A method for sending segments using different forward error correction methods on a network as recited in claim 134 133 wherein said selecting of said forward error correction mechanism method further comprises selecting said a forward error correction mechanism method based at least in part upon ~~on~~ a network condition selected from the group consisting of one or more cyclic redundancy check errors and one or more forward error correction errors.

135.-143. (Cancelled)

144. (Currently Amended): A method for receiving segments using different forward error correction methods on a network comprising:

- A. receiving a preamble and segment data encoded with forward error correction on a receiving network node on a time division multiplexed network; and
- B. determining a forward error correction mechanism method based on said preamble; wherein said forward error correction method is selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said receiving network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network.

145. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein ~~receiving said segment data further comprises receiving said segment data on said network is selected from one of: further comprising a network selected from the group consisting of a wireless network, a light frequency network, a power line network, and a wired network.~~

146. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining said forward error correction ~~mechanism~~ method further comprises determining said forward a forward error correction ~~mechanism's code's~~ length.

147. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining said forward error correction ~~mechanism~~ method further comprises determining said segment data's length based on said preamble.

148. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining said forward error correction ~~mechanism~~ method further comprises correcting errors in said segment data using an error detecting ~~mechanism~~ method selected from the group consisting of Hamming codes, Convolutional codes, Reed-Solomon codes, Low Density Parity Check Codes, Trellis codes, Block Turbo codes and Walsh codes.

149. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining a forward error correction ~~mechanism~~ method further comprises detecting a preamble that is 40 bits in length.

150. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining a forward error correction method further comprises detecting a forward error correction ~~mechanism~~ method using a 5/16 rate forward error correction code.

151. (Currently Amended): A method for receiving segments using different forward error correction methods on a network as recited in claim 144, wherein determining a

forward error correction ~~mechanism~~ method further comprises detecting a preamble that indicates no forward error correction.

152.-177. (Cancelled)